

App. No. 10/526,858*
Office Action Dated October 31, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

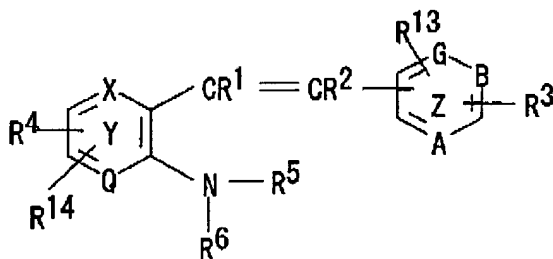
Claims 1, 9 and 15-16 are amended.

Claims 5-8, 10-14, and 17-23 are canceled without prejudice or disclaimer.

Claims 24-27 are new.

Listing of Claims:

1. (CURRENTLY AMENDED) A pharmaceutical composition for treating malignant tumor, ~~which is administered in combination with another antitumor agent(s)~~ and which comprises a compound of the following formula (I) or a pharmaceutically acceptable salt thereof and at least one other antitumor agent selected from the group consisting of platinum compounds, topoisomerase acting agents, microtubule acting agents and antitumor antibiotics:



(I)

wherein R¹ and R² are the same or different and each represents hydrogen, alkyl of 1-6 carbon atoms, acyl of 1-6 carbon atoms, cyano, or -COOR (R represents hydrogen or C1-6 alkyl);

App. No. 10/526,858
Office Action Dated October 31, 2005

R^3 , R^4 , R^{13} and R^{14} are the same or different and each represents hydrogen, alkyl of 1-6 carbon atoms, alkoxy of 1-6 carbon atoms, halogenoalkoxy of 1-6 carbon atoms, acyl of 1-6 carbon atoms, acyloxy of 1-6 carbon atoms, hydroxy, halogen, nitro, cyano, amino, acylamino of 1-6 carbon atoms, aminoalkoxy of 1-6 carbon atoms, or morpholinoalkoxy with 1-6 carbon atoms in the alkyl moiety;

R^3 and R^{13} or R^4 and R^{14} may independently combine together to form methylenedioxy; R^5 represents (1) hydrogen, (2) alkyl of 1-6 carbon atoms which is optionally substituted by halogen, amino, monoalkylamino of 1-6 carbon atoms, dialkylamino of 1-6 carbon atoms, morpholino, alkoxy of 1-6 carbon atoms, or hydroxy, (3) alkenyl of 2-6 carbon atoms which is optionally substituted by halogen, (4) alkynyl of 2-6 carbon atoms, or (5) acyl of 1-6 carbon atoms;

R^6 represents (1) aroyl of 7-11 carbon atoms which is optionally substituted by alkyl of 1-6 carbon atoms, alkoxy of 1-6 carbon atoms, or halogen or (2) arylsulfonyl of 6-10 carbon atoms which is optionally substituted by alkyl of 1-6 carbon atoms, alkoxy of 1-6 carbon atoms, halogenoalkoxy of 1-6 carbon atoms, hydroxy, nitro, or halogen; and A, B, G, Q and X may be the same or different and each represents N, CH, $N \rightarrow O$, or $N^+-(R^7)E^-$ (R^7 represents alkyl of 1-6 carbon atoms or arylalkyl of 7-14 carbon atoms; E^- represents a counterion for N^+);

provided that those wherein A, B, and G concurrently represent N, and those wherein A, B, G, Q, and X concurrently represent CH are excluded; and when any of A, B, G, Q and X represents $N \rightarrow O$ or $N^+-(R^7)E^-$, only either of X or Q on Ring Y and/or only one of A, B and G on Ring Z can represent $N \rightarrow O$ or $N^+-(R^7)E^-$.

App. No. 10/526,858
Office Action Dated October 31, 2005

2. (ORIGINAL) The pharmaceutical composition of claim 1, which comprises the compound of the formula (I) wherein R^1 and R^2 each represents hydrogen; R^3 , R^4 , R^{13} and R^{14} are the same or different and each represents hydrogen, acyl of 2-4 carbon atoms, halogen or hydroxy; R^5 represents hydrogen, alkyl of 1-3 carbon atoms substituted by hydroxy or acyl of 2-4 carbon atoms; R^6 represents phenylsulfonyl substituted by alkoxy of 1-3 carbon atoms; Ring Y is phenyl and Ring Z is 4-pyridyl or N-oxide thereof, or a pharmaceutically acceptable salt thereof.

3. (ORIGINAL) The pharmaceutical composition of claim 2, which comprises the compound of the formula (I) wherein R^1 and R^2 each represents hydrogen; R^3 , R^4 , R^{13} and R^{14} are the same or different and each represents hydrogen, acetyl, fluorine or hydroxy; R^5 represents hydrogen, ethyl substituted by hydroxy or acetyl; R^6 represents phenylsulfonyl substituted by methoxy; Ring Y is phenyl and Ring Z is 4-pyridyl or N-oxide thereof, or a pharmaceutically acceptable salt thereof.

4. (ORIGINAL) The pharmaceutical composition of claim 3, wherein the compound of the formula (I) is a compound selected from the group consisting of:

(E)-4-[2-[2-[N-[(p-methoxyphenyl)sulfonyl]amino]phenyl]ethenyl]pyridine,

(E)-4-[2-[2-[N-[(p-methoxyphenyl)sulfonyl]amino]phenyl]ethenyl]pyridine 1-oxide,

(E)-4-[2-[2-[N-(2-hydroxyethyl)-N-[(p-methoxyphenyl)sulfonyl]amino]phenyl]ethenyl]pyridine 1-oxide,

App. No. 10/526,858

Office Action Dated October 31, 2005

(E)-4-[2-[2-[N-(2-hydroxyethyl)-N-[(p-methoxyphenyl)-sulfonyl]amino]phenyl]ethenyl]pyridine,

(E)-4-[2-[2-[N-acetyl-N-[(p-methoxyphenyl)sulfonyl]-amino]phenyl]ethenyl]pyridine 1-oxide, and

(E)-4-[2-[2-[N-acetyl-N-[(p-methoxyphenyl)sulfonyl]-amino]phenyl]ethenyl]pyridine, or a pharmaceutically acceptable salt thereof.

5-8. (CANCELED)

9. (CURRENTLY AMENDED) A kit for combined administration for the treatment of malignant tumor, which comprises a preparation containing a compound of the formula (I) as defined in claim 1, or a pharmaceutically acceptable salt thereof, and a preparation comprising at least one other another antitumor agent selected from the group consisting of platinum compounds, topoisomerase acting agents, microtubule acting agents and antitumor antibiotics.

10-14. (CANCELED)

15. (CURRENTLY AMENDED) The method of claim 1327, wherein a therapeutically effective amount of a compound of the formula (I) wherein R^1 , R^2 , R^3 , R^4 , R^{13} , R^{14} , R^5 , R^6 , A, B, G, Q and X are as defined above, or a pharmaceutically acceptable salt thereof is administered simultaneously with ~~another~~ the other antitumor agent.

App. No. 10/526,858

~~Office Action Dated October 31, 2005~~

16. (CURRENTLY AMENDED) The method of claim ~~13~~27, wherein a therapeutically effective amount of a compound of the formula (I) wherein R^1 , R^2 , R^3 , R^4 , R^{13} , R^{14} , R^5 , R^6 , A, B, G, Q and X are as defined above, or a pharmaceutically acceptable salt thereof is administered in combination with ~~another~~ the other antitumor agent sequentially.

17-23. (CANCELED)

24. (NEW) The pharmaceutical composition of claim 1, wherein the other antitumor agent is selected from the group consisting of cisplatin, carboplatin, camptotecin, irinotecan, etoposide, vincristine, vinblastine, vinorelbine, paclitaxel, docetaxel hydrate, doxorubicin, bleomycin, cyclophosphamide, and anthracycline.

25. (NEW) The kit of claim 9, wherein the other antitumor agent is selected from the group consisting of cisplatin, carboplatin, camptotecin, irinotecan, etoposide, vincristine, vinblastine, vinorelbine, paclitaxel, docetaxel hydrate, doxorubicin, bleomycin, cyclophosphamide, and anthracycline.

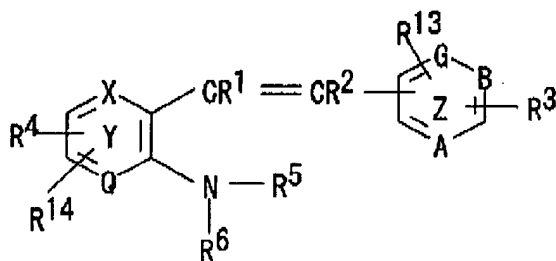
26. (NEW) A method for treating a patient suffering from malignant tumor comprising administering a therapeutically effective amount of the compound of the formula (I) defined in claim 1, or a pharmaceutically acceptable salt thereof in combination with another antitumor agent(s) to the patient in need thereof, wherein the

App. No. 10/526,858

Office Action Dated October 31, 2005

other antitumor agent is selected from the group consisting of cisplatin, carboplatin, camptotecin, irinotecan, etoposide, vincristine, vinblastine, vinorelbine, paclitaxel, docetaxel hydrate, doxorubicin, bleomycin, cyclophosphamide, and anthracycline.

27. (NEW) A method for treating a patient suffering from malignant tumor comprising administering a therapeutically effective amount of the compound of the following formula (I), or a pharmaceutically acceptable salt thereof in combination with at least one other antitumor agent to the patient in need thereof, wherein the other antitumor agent is selected from the group consisting of platinum compounds, topoisomerase acting agents, microtubule acting agents and antitumor antibiotics:



(I)

wherein R^1 and R^2 are the same or different and each represents hydrogen, alkyl of 1-6 carbon atoms, acyl of 1-6 carbon atoms, cyano, or $-COOR$ (R represents hydrogen or C1-6 alkyl);

R^3 , R^4 , R^{13} and R^{14} are the same or different and each represents hydrogen, alkyl of 1-6 carbon atoms, alkoxy of 1-6 carbon atoms, halogenoalkoxy of 1-6 carbon atoms, acyl of 1-6 carbon atoms, acyloxy of 1-6 carbon atoms, hydroxy, halogen, nitro, cyano, amino,

App. No. 10/526,858

Office Action Dated October 31, 2005

acylamino of 1-6 carbon atoms, aminoalkoxy of 1-6 carbon atoms, or morpholinoalkoxy with 1-6 carbon atoms in the alkyl moiety;

R^3 and R^{13} or R^4 and R^{14} may independently combine together to form methylenedioxy;

R^5 represents (1) hydrogen, (2) alkyl of 1-6 carbon atoms which is optionally substituted by halogen, amino, monoalkylamino of 1-6 carbon atoms, dialkylamino of 1-6 carbon atoms, morpholino, alkoxy of 1-6 carbon atoms, or hydroxy, (3) alkenyl of 2-6 carbon atoms which is optionally substituted by halogen, (4) alkynyl of 2-6 carbon atoms, or (5) acyl of 1-6 carbon atoms;

R^6 represents (1) aryl of 7-11 carbon atoms which is optionally substituted by alkyl of 1-6 carbon atoms, alkoxy of 1-6 carbon atoms, or halogen or (2) arylsulfonyl of 6-10 carbon atoms which is optionally substituted by alkyl of 1-6 carbon atoms, alkoxy of 1-6 carbon atoms, halogenoalkoxy of 1-6 carbon atoms, hydroxy, nitro, or halogen; and

A, B, G, Q and X may be the same or different and each represents N, CH, $N \rightarrow O$, or N^+ -(R^7) E^- (R^7 represents alkyl of 1-6 carbon atoms or arylalkyl of 7-14 carbon atoms; E^- represents a counterion for N^+);

provided that those wherein A, B, and G concurrently represent N, and those wherein A, B, G, Q, and X concurrently represent CH are excluded; and when any of A, B, G, Q and X represents $N \rightarrow O$ or $N^+-(R^7)E^-$, only either of X or Q on Ring Y and/or only one of A, B and G on Ring Z can represent $N \rightarrow O$ or $N^+-(R^7)E^-$.